

Abstract of the Disclosure:

A method for characterizing and simulating a CMP process, in which a substrate to be polished, in particular a semiconductor wafer, is pressed onto a polishing cloth and is rotated relative to the latter for a defined polishing time. The method includes defining a set of process parameters, in particular a compressive force and a relative rotational speed between a substrate and polishing cloth; preparing and characterizing a test substrate having test patterns with different structure densities using the defined process parameters; determining a set of model parameters for simulating the CMP process from results of the characterization of the test substrate; determining layout parameters of the substrate which is to be polished; defining a profile of demands for a CMP process result for the substrate to be polished; and simulating the CMP process in order to determine the polishing time required to satisfy the profile of demands.

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